WHAT IS CLAIMED IS:

1. An apparatus comprising:

a line-input to be coupled to a telephone line;

a first output to couple a version of a signal received at the line-input to a receive path of a modulator-demodulator (modem);

a sampling circuit coupled to the line-input to provide a sampled version of the signal received; and

a detector coupled to the sampling circuit, the processor to correlate the sampled version of the signal received with a phase-shifted version thereof to identify call-waiting tone in the sampled version of the signal and provide an indication thereof.

2. The apparatus of claim 1 wherein the sampling circuit includes an analog-to-digital (A/D) converter coupled to the line-input and the first output, the A/D converter to provide a digital version of the signal received at the line-input to the first output.

3. The apparatus of claim 1 wherein the apparatus is embodied as a modem.

4. The apparatus of claim 1 wherein the detector is embodied in the modem.

5. The apparatus of claim 1 wherein the detector includes:

a processor;

memory operably associated with the processor; and

a program of executable instructions to correlate the sampled version of the signal received with a phase-shifted version thereof to identify call-waiting tone in the sampled version of the signal and provide an indication thereof.

6. The apparatus of claim 1 wherein the modem is associated with a processing system.

7. The apparatus of claim 6 wherein the processing system provides a call-waiting notification in response to the indication provided by the processor.

8. The apparatus of claim 7 wherein the call-waiting notification provided by the processing system includes an on-screen display.

9. The apparatus of claim 1 further including an indicator responsive to the indication provided by the processor.

10. The apparatus of claim 1 further including a second output coupled to the line-input, the second output to be coupled to a telephone.

11. The apparatus of claim 10 wherein the second output provides a ring-tone to the telephone coupled thereto in response to the indication provided by the processor.

12. The apparatus of claim 1 further including a user-selectable control operable to accept a waiting call indicated by the processor.

13. The apparatus of claim 12 wherein the user-selectable control is further operable to place a modem session on-hold.

14. The apparatus of claim 1 wherein the indication provided by the processor includes call-waiting caller identification information.

15. A method comprising:

coupling a telephone line to a call-waiting detector and to a receive path of a modulator-demodulator (modem);

sampling a signal received over the telephone line during a modem communication session;

correlating the sampled version of the signal received with a phase-shifted version thereof to identify call-waiting tone in the sampled version of the signal; and

providing an indication based on a result of the correlating.

16. The method of claim 15 wherein the call-waiting detector is embodied in the modem.

17. The method of claim 15 further including:
providing the indication to an associated processing system; and
using the processing system to provide a call-waiting notification in response to the indication.

18. The method of claim 17 wherein using the processing system to provide a call-waiting notification includes displaying the call-waiting notification on a display.

19. The method of claim 15 further including coupling the call-waiting detector to a telephone.

20. The method of claim 19 wherein providing an indication includes providing a ring tone to the telephone coupled to the call-waiting detector.

21. The method of claim 15 further including operating a user-selectable control to accept a waiting call in response to the indication.

22. The method of claim 21 further including operating the user-selectable control to place the modem communication session on-hold.

23. The method of claim 15 wherein providing an indication includes providing call-waiting caller identification information.

24. A computer program product tangibly embodying a program of executable instructions, said program of instructions including:
at least one executable instruction to determine if a sampled signal exceeds a first power threshold consistent with a notification signal;
at least one executable instruction to perform a cross-correlation of the sampled signal with a phase-shifted version of the sampled signal; and

at least one executable instruction to determine if a notification tone is present based, at least in part, on results of the determination and the cross-correlation.

25. The computer program product of claim 24, wherein the at least one executable instruction to perform a cross-correlation includes:

at least one executable instruction to perform a plurality of cross-correlations of the sampled signal with different phase-shifted versions of the sampled signal, wherein each of the different phase-shifted versions is phase shifted by a different amount.

26. The computer program product of claim 24, wherein the at least one executable instruction to determine includes at least one executable instruction to perform an autocorrelation of the sampled signal.

27. The computer program product of claim 24 further including at least one executable instruction to phase-shift the sampled signal by an integer multiple of a period of the notification signal to produce the phase shifted version of the sampled signal.

28. The computer program product of claim 24, further including at least one executable instruction to phase-shift the sampled signal by a multiple of one-half of a period of the notification signal to produce the phase shifted version of the sampled signal.

29. The computer program product of claim 24, wherein the notification signal includes a call waiting signal.

30. The computer program product of claim 24, wherein the communications channel includes a telephone line.